

Hazard Communication in the Workplace

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Testimony

STATEMENT OF JOHN L. HENSHAW  
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OCCUPATIONAL SAFETY AND HEALTH  
BEFORE THE  
SUBCOMMITTEE ON EMPLOYMENT, SAFETY AND TRAINING  
COMMITTEE ON HEALTH, EDUCATION, LABOR AND PENSIONS  
UNITED STATES SENATE

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Mr. Chairman, Members of the Subcommittee:

Thank you for the opportunity to discuss the steps that the Occupational Safety and Health Administration (OSHA) is taking to improve implementation of OSHA's Hazard Communication Standard. I would also like to thank the Chairman for holding this hearing to help draw renewed attention to the need to provide accurate information to employees who work with potentially hazardous chemicals. Our goal is to adapt hazard communication to the workplaces of the 21st century and OSHA is doing that through a new initiative that I announced last week and will describe later in my testimony.

More than 30 million workers in this country are exposed to hazardous chemicals in their work environment. To protect these workers, OSHA adopted the Hazard Communication Standard (HCS) in November 1983. The standard requires chemical manufacturers and importers to evaluate the hazards of chemicals that they produce and distribute. The HCS requires information about hazards and protective measures to be disseminated on container labels and Material Safety Data Sheets (MSDSs). All employers with employees exposed to regulated chemicals must provide access to the labels and the MSDSs. Employers using the manufactured chemicals must also train their employees to understand the information provided by the MSDS and the labels and how to use the information to protect themselves.

The HCS covers all chemicals used in American workplaces. It is criteria-based, so the standard is not limited to a list of chemicals at any given point in time. The standard addresses trade secrets to ensure protection of legitimate claims of confidentiality at the same time that it requires disclosure of safety and health information.

The HCS covers about 650,000 hazardous-chemical products in over three million work establishments. It has made the dissemination of hazard information about chemical products a standard business practice in the United States. There is now a generation of employers and employees who have continuously worked in an environment in which information about chemicals in their workplaces has been freely available.

MSDSs are the primary means of transmitting detailed chemical-hazard information to employers that use them and to their employees. The MSDS is a technical bulletin, which contains information such as chemical composition, health hazards, and precautions for safe handling and use. Most safety and health professionals consider MSDSs to be a primary component of their company's hazard communication programs. Even prior to promulgation of the HCS, many chemical manufacturers and importers included MSDSs with hazardous chemicals as a good business practice.

The HCS places primary responsibility for preparing and disseminating the MSDSs with the chemical manufacturer. The HCS states clearly that manufacturers, importers, and employers preparing MSDSs shall ensure that the recorded information accurately reflects the scientific evidence used in making the hazard determination. However, MSDSs alone cannot protect workers from chemical hazards. The HCS also requires manufacturers to place labels on containers of hazardous chemicals and for employers using the manufactured chemicals to train their workforce.

Due to its broad scope and significant impact, the HCS has been discussed, debated, and amended over the last 21 years. OSHA has reviewed its enforcement of the rule and modified its practices and guidance to the regulated community to reflect lessons learned. OSHA has also been careful in considering changes to the HCS because modifications to the labels and the MSDS would be costly and time-consuming for the private sector. In response to concerns about the accuracy of MSDSs used in American workplaces, Secretary of Labor Elaine L. Chao asked me to review current requirements under the HCS and recommend any needed changes.

In response to the Secretary's request, OSHA staff reviewed the available evidence, including scientific literature and studies; considered OSHA's institutional knowledge, including experience implementing the standard; and assessed the practical issues faced by employers and manufacturers in complying with the standard. We have concluded that changes to the text of the HCS are not needed to improve the accuracy of MSDSs. Inaccuracies arise from failure to comply with existing requirements. OSHA's review of the HCS and MSDSs has identified many of the reasons why there are problems with MSDS accuracy and the Agency is addressing those problems through our new initiative, announced last week and described later in this statement.

At the time the HCS was adopted, available MSDSs followed different formats. Chemical manufacturers that had been providing MSDSs for many years were concerned about being required to change what they had been doing voluntarily. OSHA thus adopted a performance-oriented requirement that allowed variations in format as long as all the

necessary information appeared on the MSDS. The HCS also required more extensive information than had been previously provided, particularly for health effects of chemicals. Thus, the two-page format common in the past is rarely used now. Most MSDSs contain a minimum of four pages and many exceed that length.

The value of properly completed MSDSs has been demonstrated repeatedly. However, there have been a number of limited studies and investigations indicating that some MSDSs may contain errors. While this information indicates there are inaccurate MSDSs in circulation, there has never been a comprehensive study on this topic that provides more than anecdotal evidence about a limited number of MSDSs. This is not surprising since a study of that magnitude would be far-reaching, costly, and time-consuming. However, lacking such a study, it is difficult to determine how widespread the problem is today. The previously conducted studies mentioned above are quite old in some cases. In others, the authors have made assumptions about what they consider to be compliance with the standard that may not be consistent with the standard's requirements. For example, in a study regarding MSDSs on toluene diisocyanate, the authors assumed the MSDS was inaccurate if it did not explicitly refer to occupational asthma, but discussed respiratory sensitization. Since respiratory sensitization is the health hazard defined in the HCS, either term would be accepted as compliance for OSHA.

In addition to issues of accuracy, there have been complaints that MSDSs are not comprehensible to workers and to small employers. The HCS was designed to address problems of comprehensibility by providing general information on labels in conjunction with the MSDSs and other information available to employees. Training programs are a critical component of hazard communication because they help ensure that workers understand the information they receive from labels and MSDSs. One reason why there are concerns regarding comprehensibility is that there are multiple audiences for MSDS information—workers, employers, and safety and health professionals. What may be comprehensible to an experienced professional in the field of safety and health may be difficult for an employer or an employee to understand. In addition, Title III of the Superfund Amendments and Reauthorization Act mandates that MSDSs be made available to state emergency-response commissions, local emergency-planning committees, and fire departments to assist in planning for emergencies. It is difficult, if not impossible, to design a document that meets the informational needs of each of these audiences and is universally comprehensible as well.

Disparity in the qualifications of those who prepare MSDSs is another significant reason for variability in quality. OSHA's HCS does not address the qualifications needed to prepare an MSDS. Those who write MSDSs come from a wide variety of educational backgrounds, and there is little training available that is specific to this task. Accurately depicting the health effects of chemicals requires a technical background to review relevant scientific literature. Large chemical manufacturers often have multi-disciplinary staffs of experts devoted to this task, but smaller manufacturers may not have such resources. Thus, the disparity in qualifications can lead to differences in the quality of information included in an MSDS.

A cause of incomplete MSDS information is the lack of data on the health effects of some chemicals. The HCS does not require testing of chemicals or protective measures; it is based on available information. The chronic- or long-term health effects of many chemicals are not always well-known.

In addition, most chemical products on the market are mixtures unique to a single manufacturer. The HCS provides manufacturers of mixtures a number of alternatives to determining hazards. A chemical manufacturer could choose to test a mixture as a whole through a full range of tests, including tests to determine health risks and physical hazards. Another accepted approach to hazard determinations is for the manufacturer to test certain properties of a chemical and to rely on the available research for others. If the manufacturer does not test the mixture as a whole, the mixture is assumed to present the same hazards as its individual-component parts, and the manufacturer may rely on the upstream chemical manufacturers' hazard determinations for those constituent substances. The MSDS for the mixture would then be comprised of the MSDSs for each component. Because of the variations in methods used to determine hazards, employers using chemical mixtures must make some judgments about how to apply the information provided by manufacturers to the conditions in their individual workplace.

The amount and quality of research on chemical hazards also has an impact on the accuracy of information on the MSDS. Even the best available evidence may not provide sufficient information about hazardous effects and protective measures.

OSHA staff has discussed these issues informally with representatives from other nations that have MSDS requirements and they report similar problems regarding the quality of MSDS information.

OSHA has been studying ways of improving the accuracy and comprehensibility of MSDSs for many years. In May 1990, the Agency issued a request for information about MSDSs in the Federal Register. From those who responded, there was general support for consistent information on MSDSs and a standardized format. In September 1995, OSHA asked its National Advisory Committee on Occupational Safety and Health for recommendations on how to improve chemical-hazard communication, including methods of simplifying MSDSs and reducing paperwork for employers and manufacturers. After hearing from the public, including representatives of small businesses and unions, the Committee reaffirmed the importance of the HCS, and concluded that MSDSs have become long and complicated because they are used for many purposes other than to meet OSHA requirements. OSHA has no control over such non-OSHA purposes. A majority of the Committee supported the use of a standardized format such as that developed by the American National Standards Institute. OSHA has indicated this preference in its enforcement directives for the HCS.

To address concerns raised and to enhance the quality of hazard information presented to employers and employees, OSHA has announced a new hazard- communication initiative. There are three components of the program: (1) compliance assistance -- including additional guidance materials, a new portal on OSHA's Web Site, and added

outreach and education through new alliances; (2) an enforcement initiative; and (3) consideration of adopting the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), and preparation of a guide to raise awareness of the GHS.

OSHA has developed three guidance documents to improve the HCS. The first is a guide to performing a hazard determination under the requirements of the HCS. An accurate hazard determination is the first step to an accurate MSDS and label. The guidance provides details on how to identify the appropriate information necessary for a hazard determination, and further how to evaluate it and determine what hazards are covered. The second document is a model training program, which will provide employers with information on how to train their employees to understand hazards identified on labels and MSDSs and take appropriate precautions. These two documents are currently on OSHA's Web Site to allow public comment for 30 days. The third document is a guide to preparing MSDSs, and will provide assistance on how to write clear and complete MSDSs with a suggested format. The document will list sources of information and include suggestions for the type of information to complete each section of the MSDS. This guidance will be available in draft form on OSHA's Web Site after the comment period for the first two documents closes.

Last October, OSHA signed an alliance with the Society for Chemical Hazard Communication, a professional society that promotes improvements in chemical-hazard communication. This organization is working with us to develop a short course on preparation of MSDSs, directed primarily to small businesses that prepare MSDSs. The Society -- including more than 600 members representing industry, academia, and government -- has considerable expertise in hazard communication and experience in putting together professional-development courses. The Society is also working with OSHA on a checklist that can be used to review MSDSs for accuracy. A number of other joint projects with this organization are being planned.

In addition to the training and other initiatives described above and the development of a review tool such as a checklist, the HCS will also continue to be a focus of OSHA enforcement. While violations of HCS provisions are often cited during inspections, the accuracy of information is not the focus of these citations in most situations. Therefore, OSHA is developing an enforcement initiative for compliance officers to review and evaluate the adequacy of MSDSs. Under this program, the Agency will choose a certain number of chemicals, and following the requirements in the HCS, identify some critical elements (phrases, words, etc.) that should appear on an accurate MSDS. Compliance officers would use this information as they encounter MSDSs for these chemicals at worksites. Where MSDSs are found that do not contain these critical elements, OSHA will notify the manufacturer in writing of the deficiencies or inaccuracies. Manufacturers will be required to correct and update their MSDS. They will then have to respond to OSHA and inform the Agency of the steps taken to correct and update their data sheet. Those manufacturers that fail to respond or do not update their MSDS can potentially be cited under the HCS.

In addition, compliance staff and the public are being made aware of the availability of

International Chemical Safety Cards on OSHA's Web Site. These cards are similar to MSDSs in terms of the information provided. They are internationally developed and peer-reviewed, cover over 1,300 substances, and are available in fourteen languages. They are a good screening tool to be used when reviewing MSDSs on covered substances, and are going to be modified to be consistent with the GHS classification criteria and MSDS format.

OSHA has a great deal of hazard-communication information available on its Web Site. We have established a portal page to consolidate this information and allow access directly from OSHA's homepage. This will make it easier for the public to find the HCS, and guidance and compliance-assistance materials involving the standard. Other sources of information helpful to employers and employees will also be accessible through the portal page. OSHA expects that almost 50 million visits will be made to its Web Site this year.

In the long term, global harmonization of chemical information and labeling will improve communication of chemical risks. Standardized presentation of information on labels and MSDSs throughout the industrialized world can address many of the concerns about comprehensibility of chemical-hazard information. Consistent presentation of information would simplify the task of reviewing MSDSs for accuracy, allowing those who prepare and review the documents to find missing elements more easily and OSHA compliance officers to examine MSDSs more efficiently when conducting inspections. OSHA has worked with the international community on global harmonization since the HCS was promulgated. In addition to the benefits associated with improved comprehensibility and communication, implementation of the GHS around the world could also facilitate international trade in chemicals. In the United States, there would also be a benefit of domestic harmonization if all of the affected agencies adopt the GHS. To increase awareness of the GHS, OSHA is preparing a guide on the classification and labeling system that was adopted by the United Nations in December 2002. The United States is now considering adoption of the GHS. Further information about the GHS is available on OSHA's Web Site.

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Mr. Chairman, it is not surprising that problems arise from time to time when there is such a large universe of chemicals and there are millions of workers exposed to these substances. I believe that the steps I have outlined today will actively address the problems that you and others have pointed out and will significantly raise awareness among both employers and employees of the need to provide information on chemicals used in America's workplaces. I will be happy to answer any questions.